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EXAMINER
LEE, JUSTIN YE

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/743,296	SO, HYEOUN-JOO
	Examiner	**Art Unit**	
	Justin Y. Lee	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _28 September 2007_.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1,2,4-7,9-13,15,16,19,20 and 22_ is/are pending in the application.

  4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1,2,4-7,9-13,15,16,19,20 and 22_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

  a) ☒ All b) ☐ Some * c) ☐ None of:

  1. ☐ Certified copies of the priority documents have been received.

  2. ☐ Certified copies of the priority documents have been received in Application No. _____.

  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
  Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
  Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   This Office Action is in response to Amendment filed on 9/28/07.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

3.   Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention.

Claim 1 recites the limitation "performing a cell search...performing the cell

search..." in last two lines of claim 1. There is insufficient antecedent basis for this

limitation in the claim. The applicant used the term "a cell search" and "the cell search"

in claim 1 so the "the cell search" is the same cell search as "a cell search". But the from

reading the claim 1, "a cell search" should come after "the cell search" for example,

performing a first cell search ("the cell search") about the obtained frequency of the one

service vendor, if a requested frequency is not found, then performing a second cell

search ("a cell search") about a specific frequency band. Please also see claims 10 and

16 of the current application ("a cell search" and "another cell search") for further

clarification.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 1-2, 4-7, and 9 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Krishnan (US 2002/0168976 A1) in view of Hooper et al. (US

5,734,980) and further in view of Chao et al. (US 2005/0153696 A1).

Regarding claim 1, Krishnan discloses a frequency searching method

comprising:

receiving system information from a network (the system information is received

in form of static table 110, which is transferred from a base station to the device 100 -

page 3, paragraph 0027, lines 32-38) (the system information or static table 110

includes roaming list and lookup table - paragraph 0014), wherein the received system

information comprises frequency information of service vendors (Krishnan, e.g.

"Airtouch" or "Sprint" - paragraph 0009) (the SID and NID identify respective service

vendors, e.g. "Airtouch" or "Sprint", as disclosed in paragraph 0009, and the system

information/static table 110 includes SID and NID for respective frequency/channel

(220), as exhibited in Figure 3; therefore, the received system information relates to

frequency bands of use for each of the service vendors) (system information/static table

110 includes usage frequency/block or channel number which is indicative of frequency

of transmission/usage frequency - paragraph 0010); and

obtaining a frequency (220) of each service vendor (e.g. "Airtouch" or "Sprint"-

paragraph 0009) from the received system information (system information/static table

110 includes usage frequency/block or channel number which is indicative of frequency

of transmission/usage frequency - paragraph 0010), each of the obtained frequencies

corresponding to a frequency band of use for respective service vendors (because SID

and NID identify respective service vendors, e.g. "Airtouch" or "Sprint", as disclosed in

paragraph 0009, and the system information/static table 110 includes SID and NID for

respective frequency/channel (220), as exhibited in Figure 3; therefore, each of the

obtained frequencies correspond to a frequency band of use for respective service

vendors as claimed); and

performing a cell search about a specific frequency band when a requested

frequency is not found when performing the cell search about the obtained frequency of

the one service vendor (the channels are searched until a preferred system connection

is made - page 3, paragraph 0028, lines 19-25; therefore, if no system connection is

made, that is, if frequency/channel is not found "another cell search" takes place until a

preferred system connection is made).

Krishnan does not disclose performing a cell search about the obtained

frequency of one service vendor based on the obtained frequency of the one service

vendor.

Hooper et al. further disclose performing a cell search about the obtained

frequency of one service vendor based on the obtained frequency of the one service

vendor (Fig. 2, steps 70-74, cell search is performed to find a network provider); and

Performing a cell search about a specific frequency band when a requested frequency is not found when performing the cell search about the obtained frequency of the one service vendor (col. 7, lines 22-30 and 61-64, as the applicant stated, if the mobile terminal 60 fails to detect a transmission, then the method proceeds to step 96 where a next frequency of a list 64 (a specific frequency) is scanned. In other words, Hooper specifically teaches that a next frequency in the list 64 is subsequently scanned. See Remark last paragraph of page 8 filed on 9/28/07.)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Hooper et al. into the teachings of Krishnan for the purposes of enhancing system selectivity capabilities (col. 13, lines 51-53).

Krishnan and Hooper et al. do not disclose the system information is received from the network through a Radio Resource Control of a UMTS Terrestrial Radio Access Network.

Chao et al. further disclose the system information is received from the network through a Radio Resource Control of a UMTS Terrestrial Radio Access Network (paragraph 20 and 13-16, broadcast control channel system information is received from UTRAN).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Chao et al. into the teachings of Krishnan and Hooper et al. for the purposes of reducing UE processing/battery consumption (paragraph 41).

Regarding claim 2, Krishnan and Hooper et al. and Chao et al. disclose everything claimed as applied above (see claim 1). In addition, the system information (static table / roaming list / lookup table) is received by a mobile communication terminal (device 100) from the network (base station) (Krishnan, paragraph 0027, lines 32-38).

Regarding claim 4, Krishnan and Hooper et al. and Chao et al. discloses everything claimed as applied above (see claim 1). In addition, storing the frequency of each service vendor in memory (108) of user equipment (Krishnan, paragraph 0027, lines 6-8).

Regarding claim 5, Krishnan and Hooper et al. and Chao et al. disclose everything claimed as applied above (see claim1). In addition, receiving the system information comprises receiving the system information in a system information block (Krishnan, the explained table is a system information block - paragraph 0027,lines 32-38).

Regarding claim 6, Krishnan and Hooper et al. and Chao et al. disclose everything claimed as applied above (see claim 5). In addition, transmitting the system information block including the frequency of each service vendor (Krishnan, e.g. "Airtouch" or "Sprint" - paragraph 0009).

Consider claim 7. Chao et al. further disclose wherein the system information is received from the network through a broadcast control channel (paragraph 20 and 13-16, system information is transmitted in a broadcast control channel).

Regarding claim 9, Krishnan and Hooper et al. and Chao et al. discloses everything claimed as applied above (see claim 1). In addition, updating stored frequencies based on the received system information from the network (Krishnan, paragraph 0027, lines 32-38).

6.   Claims 10-13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krishnan (US 2002/0168976 A1) in view of Hooper et al. (US 5,734,980) and further in view of Chao et al. (US 2005/0153696 A1).

Regarding claim 10, Krishnan discloses a frequency searching method comprising:

receiving frequency data (220, included in system information or static table 110) of a plurality of service vendors (e.g. "Airtouch" or "Sprint" - paragraph 0009) from a network (the system information is received in form of static table 110, which is transferred from a base station to the device 100 - page 3, paragraph 0027, lines 32-38) (the system information or static table 110 includes roaming list and lookup table- paragraph 0014) (system information/static table 110 includes usage frequency/block or channel number which is indicative of frequency of transmission/usage frequency - paragraph 0010), the received frequency data relating to frequency bands of use for each of the service vendors (because SID and NID identify respective service vendors, e.g. "Airtouch" or "Sprint", as disclosed in paragraph 0009, and the system information/static table 110 includes SID and NID for respective frequency/channel

(220), as exhibited in Figure 3; therefore, each of the received frequency data relates to frequency bands of use for each of the service vendors as claimed);

storing the received usage frequency data in user equipment (stored in memory 108 of device 100 - paragraph 0027);

Krishnan does not disclose performing a cell search about a stored frequency of at least one service vendor in a frequency search; and performing another cell search by frequency bands when a frequency is not found in the stored frequencies for the at least one vendor.

Hooper et al. further disclose performing a cell search about a stored frequency of at least one service vendor in a frequency search (Fig. 2, steps 70-74, cell search is performed to find a network provider); and

performing another cell search about a specific frequency band when a frequency is not found in the stored frequency of the at least one vendor (Fig. 2, steps 70-74 and 100, if the first cell search does not have a result the system performs another cell search with a second different frequency. col. 7, lines 22-30 and 61-64, as the applicant stated, if the mobile terminal 60 fails to detect a transmission, then the method proceeds to step 96 where a next frequency of a list 64 (a specific frequency) is scanned. In other words, Hooper specifically teaches that a next frequency in the list 64 is subsequently scanned. See Remark last paragraph of page 8 filed on 9/28/07.).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Hooper et al. into the teachings

of Krishnan for the purposes of enhancing system selectivity capabilities (col. 13, lines 51-53).

Krishnan and Hooper et al. do not disclose the system information is received from the network through a Radio Resource Control of a UMTS Terrestrial Radio Access Network.

Chao et al. further disclose the system information is received from the network through a Radio Resource Control of a UMTS Terrestrial Radio Access Network (paragraph 20 and 13-16, broadcast control channel system information is received from UTRAN).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Chao et al. into the teachings of Krishnan and Hooper et al. for the purposes of reducing UE processing/battery consumption (paragraph 41).

Regarding claim 11, Krishnan and Hooper et al. and Chao et al. disclose everything claimed as applied above (see claim 10). In addition, the user equipment (mobile communication device 100 - Figure 2) comprises a mobile communication terminal (Krishnan, paragraph 0025).

Regarding claim 12, Krishnan and Hooper et al. and Chao et al. disclose everything claimed as applied above (see claim 10). In addition, transmitting the frequency from the network using a system information block (Krishnan, the explained table is a system information block - paragraph 0027, lines 32-38).

Regarding claim 13. Krishnan and Hooper et al. and Chao et al. disclose everything claimed as applied above (see claim 10). In addition, wherein the system information block is transmitted through a broadcast control channel (Chao et al., paragraph 2 and 13-16 and 20).

Regarding claim 15, Krishnan and Hooper et al. and Chao et al. disclose everything claimed as applied above (see claim 10). In addition, updating stored frequencies based on received system information from the network (Krishnan, paragraph 0027, lines 32-38).

7.   Claims 16, 19-20, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krishnan (US 2002/0168976 A1) in view of Hooper et al. (US 5,734,980) and further in view of Chao et al. (US 2005/0153696 A1).

Regarding claim 16, Krishnan discloses a mobile communication apparatus (device   100- Figure 2; paragraphs 0025-0027) comprising:

a receiving device (receiver 104 - Figure 2) to receive system information (the system information is received in form of static table 110, which is transferred from a base station to the device 100- page 3, paragraph 0027, lines 32-38) (the system information or static table 110 includes roaming list and lookup table- paragraph 0014), wherein the received system information comprises frequency information of service vendors (Krishnan, e.g. "Airtouch" or "Sprint" - paragraph 0009) (the SID and NID identify respective service vendors, e.g. "Airtouch" or "Sprint", as disclosed in paragraph 0009, and the system information/static table 110 includes SID and NID for respective

frequency/channel (220), as exhibited in Figure 3; therefore, the received system

information relates to frequency bands of use for each of the service vendors) (system

information/static table 110 includes usage frequency/block or channel number which is

indicative of frequency of transmission/usage frequency - paragraph 0010); and

a memory (memory 108 - Figure 2) to store (paragraph 0027) frequency

information regarding service vendors (e.g. "Airtouch" or "Sprint" - paragraph 0009) (the

SID and NID identify respective service vendors, e.g. "Airtouch" or "Sprint", as disclosed

in paragraph 0009, and the system information/static table 110 includes SID and NID for

respective frequency/ channel (220), as exhibited in Figure 3; therefore, the received

system information relates to frequency bands of use for each of the service vendors);

and

a processing device (processor 108 - Figure 2) to obtain a frequency of a

particular service vendor from the memory (paragraphs 0025-0027).

Krishnan does not disclose wherein the processing device performs a cell search

about the obtained frequency when searching the frequency information stored in the

memory, the cell search being based on the received system information, the

processing device further performing another cell search about other frequencies when

a frequency is not found during the cell search about the stored frequency information

for a particular service vendor.

Hooper et al. further disclose wherein the processing device performs a cell

search about the obtained frequency when searching the frequency information stored

in the memory, the cell search being based on the received system information, the

processing device further performing another cell search about a specific frequency band (Fig. 2, steps 70-74, cell search is performed to find a network provider. col. 7, lines 22-30 and 61-64, as the applicant stated, if the mobile terminal 60 fails to detect a transmission, then the method proceeds to step 96 where a next frequency of a list 64 (a specific frequency) is scanned. In other words, Hooper specifically teaches that a next frequency in the list 64 is subsequently scanned. See Remark last paragraph of page 8 filed on 9/28/07.) when a frequency is not found during the cell search about the stored frequency information for the particular service vendor (Fig. 2, steps 70-74 and 100, if the first cell search does not have a result the system performs another cell search with different frequencies).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Hooper et al. into the teachings of Krishnan for the purposes of enhancing system selectivity capabilities (col. 13, lines 51-53).

Krishnan and Hooper et al. do not disclose the system information is received from the network through a Radio Resource Control of a UMTS Terrestrial Radio Access Network.

Chao et al. further disclose the system information is received from the network through a Radio Resource Control of a UMTS Terrestrial Radio Access Network (paragraph 20 and 13-16, broadcast control channel system information is received from UTRAN).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Chao et al. into the teachings of Krishnan and Hooper et al. for the purposes of reducing UE processing/battery consumption (paragraph 41).

Regarding claim 19, Krishnan and Hooper e al. and Chao et al. discloses everything claimed as applied above (see claim 16). In addition, the receiving device receives the system information in a system information block (Krishnan, the explained table is a system information block - paragraph 0027, lines 32-38).

Consider claim 20. Chao et al. further disclose wherein the receiving device receives the system information is received from the network through a broadcast control channel (paragraph 20 and 13-16, system information is transmitted in a broadcast control channel).

Regarding claim 22, Krishnan and Hooper e al. and Chao et al. discloses everything claimed as applied above (see claim 16). In addition, the processing device updates stored frequencies in the memory based on received system information from the network (Krishnan, paragraph 0027, lines 32-38).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin Y. Lee whose telephone number is (571) 272-5258. The examiner can normally be reached on M - Thu   7:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Duc Nguyen can be reached on 571-272-7503. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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